Discussion of:

The International Monetary Transmission Mechanism by Camara, Christiano, Dalgic

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Main Results

Empirical results:

- Foreign output falls in response to US monetary policy tightening
- EME output falls more than AE output

Theoretical results:

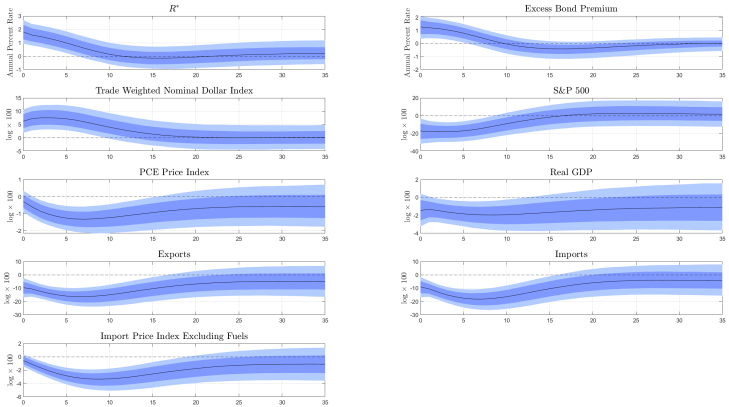
- Trade channel explains most of the fall in foreign output

Empirical Setup

- Sample period: 2006-2019 (monthly data)
- Monetary shocks: High frequency shocks from Bauer and Swanson (2023)
- Impulse responses: Panel Bayesian VARs with “Minnesota” priors
  - US VAR: 9 variables and 12 lags
  - Panel VAR: 2 lags and 11 variables (3 US + 8 local)
- AEs: Australia, Canada, UK, Germany, Japan, Korea, Switzerland, Sweden
- EMEs: Brazil, Chile, Colombia, Dominican Republic, Hungary, Indonesia, Mexico, Peru, Philippines, Poland, Russia, Serbia, South Africa, Turkey.

Response of US to US Monetary Shock

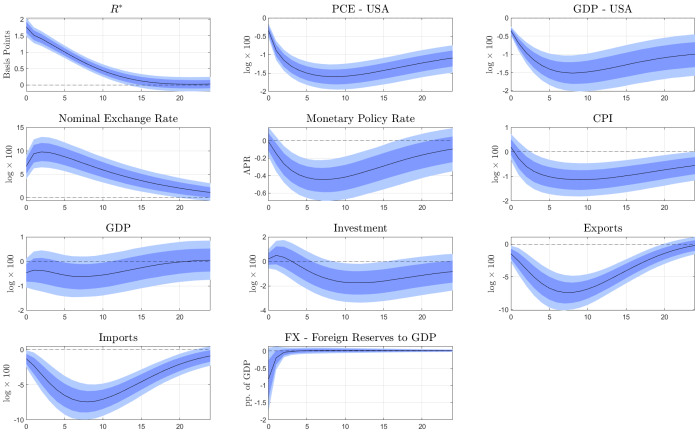
Figure 1: Response to Contractionary US Monetary Policy Shock, United States



- US GDP jumps down on impact
- Large fall of imports and exports

Response of Advanced Economies to US Monetary Shock

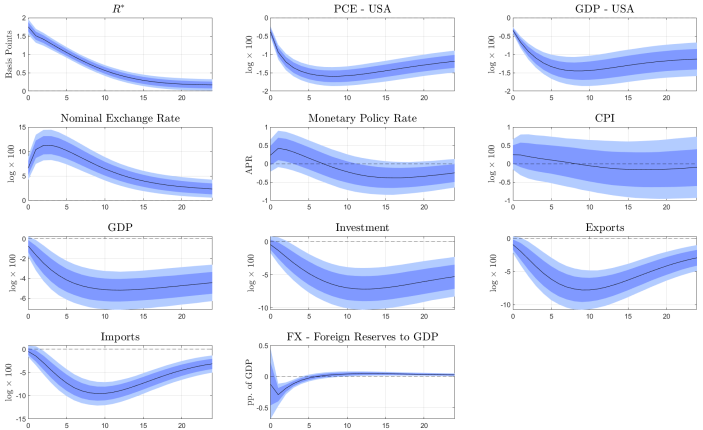
Figure 3: Response to Contractionary US Monetary Policy Shock, Advanced Economies



- Output and prices fall
- Large fall of imports and exports
- Monetary easing
- Rapid exchange rate appreciation after initial fall

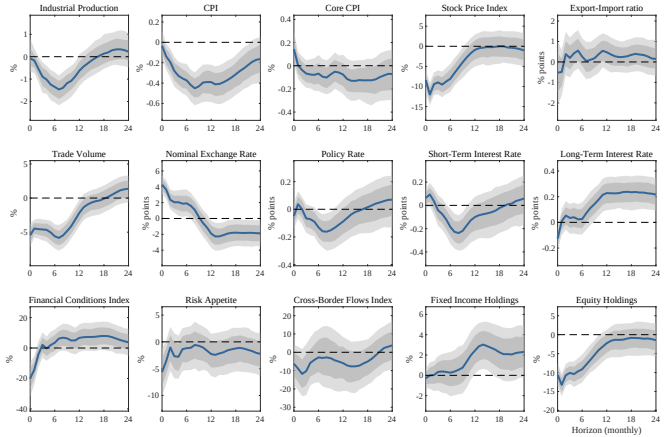
Response of Emerging Markets to US Monetary Shock

Figure 4: Response to Contractionary US Monetary Policy Shock, Emerging Markets



- Larger output response
- Large fall of imports and exports
- Monetary policy tightening
- Rapid exchange rate appreciation after initial fall

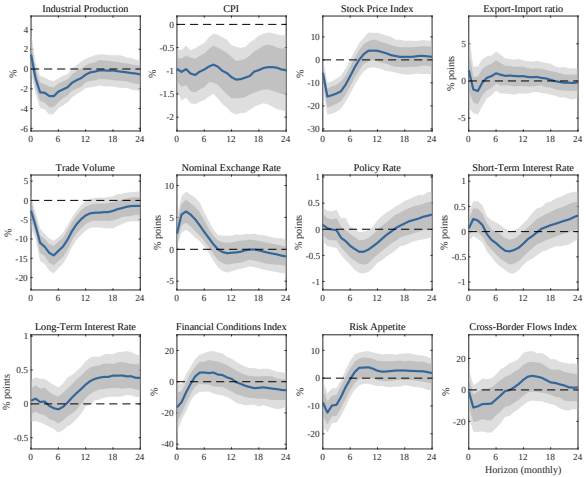
Degasperi, Hong, Ricco (2023): Advanced Economies



(a) Median Advanced Economy

- Similar results
  (smaller NER response)
- 1990-2018
- 15 countries (rather than 8)
- 12 lags rather than 2
- Miranda-Agrippino and Ricci shock rather than Bauer and Swanson

Degasperi, Hong, Ricco (2023): Emerging Markets



(b) Median Emerging Economy

- Monetary easing
  (More in line with Kalemli-Özcan 19)
- Smaller response of output
  (More in line with results in appendix)

Dynamics Causal Inference: VAR vs. LP

- Authors use a Bayesian VAR to estimate dynamic causal effects
- Alternative would be to use local projections
- Local projection: Direct regression of outcome of interest on shock
- One might ask: Why would you not use a local projection?

Why Use a VAR?

1. For identification of shocks (Cholesky, long-run restrictions, sign restrictions)
   - This is NOT what what authors are using the VAR for
   - Instead they use high frequency identified shocks
2. To enhance statistical power
   - This is what authors are using the VAR for
   - Very modest data set (14 years). Yet, lots of statistical significance.
   - They exploit VAR + priors to get statistical significance

Bias versus Variance

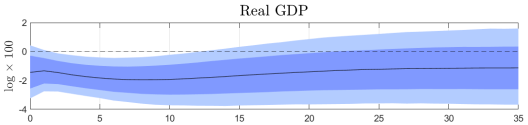
- Variance reduction comes at the potential cost of increased bias
- LP is not biased but can be very noisy
  - Minimal assumptions $\rightarrow$ no bias
  - But large variance (if data is not very informative)
- VAR is potentially biased but less noisy
  - Stronger assumptions $\rightarrow$ less variance
  - But potentially biased (if assumptions are not valid)

Two Specific Issues

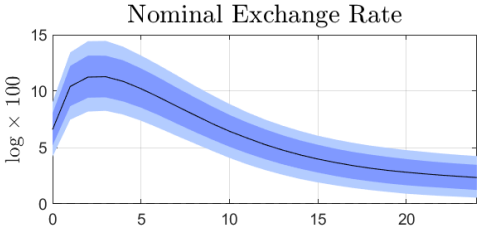
- VARs are very highly parameterized
- This raises overfitting concern
- Machine learning literature all about this
  Lasso / Ridge / etc.
- Authors use “Minnesota” prior to shrink towards unit root

- VARs include lagged dependent variables
- Such regressions are biased
  (AR coefficient biased downward)
- With 14 years of data, bias may be significant
- Minnesota prior pushes against this
- Hard to tell if two biases wash out

Two Specific Results



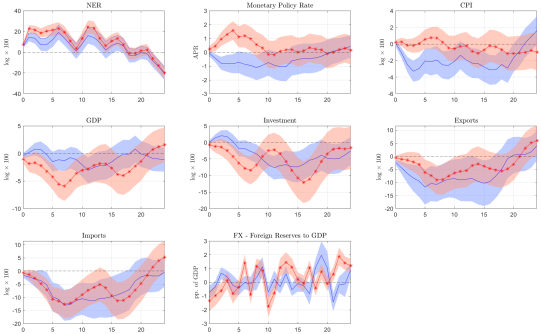
- Large GDP response on impact
- Random walk response
- VAR has 108 parameters and 168 data points per equation
- Lots of shrinkage towards random walk?



- Usually we think of exchange rates as being close to a random walk
- Estimates very far from a random walk
- Downward bias in largest root of system?

Local Projection Results

Figure 21: Response to Contractionary US Monetary Policy Shock, AEs and EMEs



Note: Starred red lines (shaded areas) represent the point estimates of β_H^h (two-standard deviation intervals) corresponding to EMEs. Solid blue lines and shaded ares corresponds to AEs. Standard deviations correspond to Newey-West robust standard errors. See text for further discussion.

- Authors present LP in appendix
- Useful to assess what is coming purely from the data
- Average across countries
- Regressions include 24 controls (168 data points)
- Jagged confidence intervals (are they too small?)

Trade Channel vs. Financial Channel

- Recent literature has emphasized financial channel of transmission of US monetary policy
  - "Global Financial Cycle" (Rey, 2013, Miranda-Agrippino Rey, 2020)
  - Kalemli-Özcan (2019), Degasperi, Hong, Ricco (2023), etc.
- Emphasizes effects of US monetary policy on financial variables
  - Global financial intermediation, international credit flows, global asset prices, VIX, etc.
- Authors seek to assess this through the lens of a structural model
  - Conclude that trade channel is vastly more important than financial channel

Basic Open Economy Model

- US monetary tightening has two effects on other countries:
  - Expenditure switching effect boosts output
  - Negative demand effect reduces output
- If second effect is larger, foreign output will fall
- I believe this is what authors are finding
  - Dollar pricing helps mute expenditure switching effect
  - But is the demand effect too large?

Strength of the Trade Channel

Table 1: Estimated Model Parameters

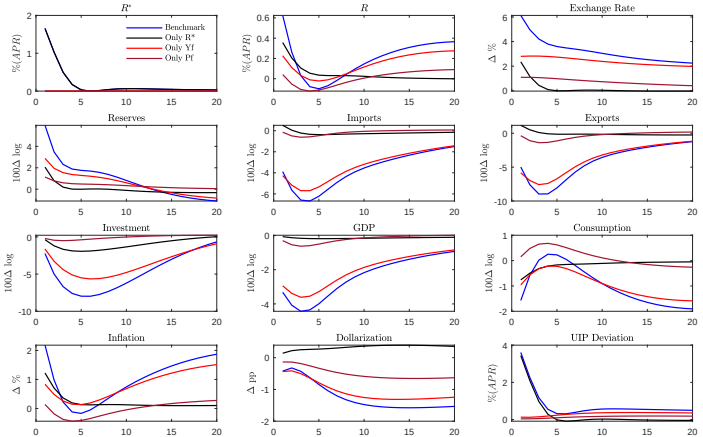
Variable	Description	Peru	EME	AE
γ	Portfolio Adjustment	2.70	1.84	4.68
γ_R	Portfolio Demand Shifter	0.91	28.42	27.90
κ	Investment Adjustment	3.14	6.92	3.03
θ_{R^*}	FX Intervention Coefficient	0.36	0.34	0.00
ρ^{FX}	FX Intervention Persistence	0.71	0.89	0.00
η_c	Consumption Elasticity of Substitution	1.43	1.16	0.78
η_x	Export elasticity of Substitution	1.49	1.82	1.40
ν_i	Investment Elasticity of Substitution	1.20	0.81	0.25
η^f	Price Elasticity of Exports	2.04	5.17	2.62
γ_f	Export Demand Shifter	2.67	5.71	4.50
θ^x	Export Calvo Stickiness	0.79	0.89	0.82
$1-\omega_c$	Home Bias, Consumption	0.53	0.54	0.93
γ_I	Home Bias, Investment	0.29	0.29	0.49
γ_x	Home Bias, Exports	0.42	0.41	0.61
γ_f	Export Demand Shifter	2.67	5.71	4.50
ρ_R	MP Persistence	0.86	0.95	0.89
$1-\phi$	Credit Dollarization	0.50	0.56	0.01
$\tilde{\Upsilon}$	Steady State Deposit Dollarization	0.40	0.40	0.05
$\frac{F^*}{4\times GDP}$	Steady State Reserves/GDP	0.30	0.15	0.05

- Exposure of small open economy to US is very large
- All of “foreign” is US
- Consumption share of US goods 46% in EMEs
- Investment share of US goods 71% in EMEs

Financial Frictions

- Model does incorporates financial frictions
- Households have quadratic cost of deviating from target portfolio share which is increasing in R_t^*
- Banks finance a fraction ϕ of lending in dollars
- Entrepreneurs face costly external finance and balance sheet effects

Financial Frictions Don't Do Anything?



- Large UIP deviations
  (High peso returns)
- Could yield capital inflows
  (which would yield a boom)
- This would not help explain fall in output
- Model needs delayed overshooting
  (Low peso returns)

Conclusion

- Thought provoking paper!
- I learned a lot from reading it and thinking about it
- Striking how large the effects of US monetary policy are on other countries
- A lot more work needed to model international financial frictions